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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,004	09/14/2006	Tomoyuki Ando	SHIGA7.056APC	6973

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EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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09/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No. 10/593,004	Applicant(s) ANDO, TOMOYUKI	
	Examiner Sin J. Lee	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/14/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites “. . . 0 to 20 mol% of the constituent unit (a3)” in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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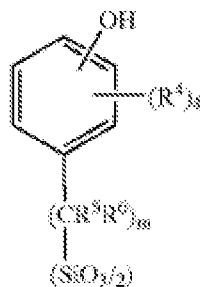
5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gronbeck et al (US 2003/0099899 A1).

In claim 25, Gronbeck teaches the following;

25. A photoimageable composition comprising a binder polymer and a photoactive component, wherein the binder polymer comprises as polymerized units one or more monomers of formula I and one or more monomers of formula II



(II)



wherein R^1 is selected from (C_1-C_{12}) alkyl, substituted (C_1-C_{12}) alkyl, (C_2-C_6) alkenyl, substituted (C_2-C_6) alkenyl, phenyl, $C_6(R^7)_5$, (C_1-C_5) alkyl($C_6(R^7)_4$), (C_1-C_5) alkyl(C_6H_4OZ), vinyl and substituted vinyl; Z is selected from (C_1-C_6) alkylsulfonate ester or arylsulfonate ester; each R^7 is independently selected from H, F, (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo(C_1-C_6)alkyl, hydroxy-halo(C_1-C_6)alkyl or halo(C_1-C_6)alkoxy; each R^5 is independently selected from R^7 and OH; each R^6 is independently selected from H or F; each R^6 is independently selected from H, F, CH_3 , CF_3 , CHF_2 , and CH_2F_2 ; and $m=0-2$.

Based on Gronbeck's teaching, one skilled in the art would immediately envisage R^1 to be a phenyl group, R^4 to be H, m to be 1 (see also claim 27 where $m = 1$).

Alternatively, it would have been obvious to one skilled in the art to have R^1 to be a phenyl group, R^4 to be H and m to be 1 or 2 with a reasonable expectation of obtaining

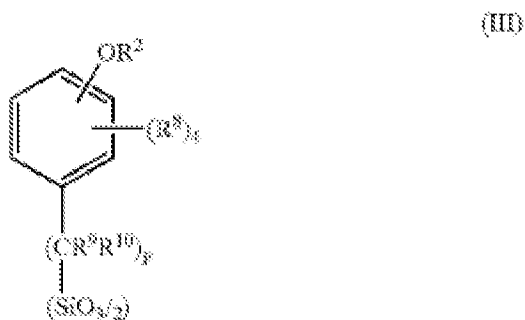
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a polymer suitable for use in bilayer resist that have controlled and/or lower dissolution rates with little or no loss of photospeed. Gronbeck teaches (see claim 28) a photoacid generator to be the photoactive component of claim 25. Claim 29 of Gronbeck teaches that the composition of claim 25 is negative-acting, and claims 30 and 31 teach that the composition comprises one or more crosslinking agents such as amine containing compounds. Thus, present inventions of claims 1 and 3-9 are anticipated by or, in the alternative, obvious over Gronbeck (since Gronbeck teaches present negative resist composition of claim 1, it is the Examiner's position that Gronbeck's negative resist composition *is capable of being used* in a two-layer resist method of claim 6, in a magnetic film pattern forming method of claims 7 and 8 or in a resist pattern forming method of claim 9 – present claims 6-9 are not method claims).

With respect to presently claim 2, Gronbeck teaches (in claim 33) the following;

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33. The composition of claim 25 wherein the binder polymer further comprises as polymerized units one or more monomers of formula III



wherein R^2 is an acid cleavable group; each R^8 is independently selected from H, F, (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, hydroxy-halo (C_1-C_6) alkyl or halo (C_1-C_6) alkoxy; each R^9 is independently selected from H or F; each R^{10} is independently selected from H, F, CH_3 , CF_3 , CHF_2 , and CH_2F ; and $p=0-2$.

As one of examples for R^2 , Gronbeck teaches (see claim 35) $-CH(CH_3)O(C_1-C_6)$ alkyl (which is a substituted alkyl group). Based on this teaching, one skilled in the art would immediately envisage R^2 to be $-CH(CH_3)O(C_1-C_6)$ alkyl, R^8 to be H and p to be 1. *Alternatively*, it would have been obvious to one skilled in the art to have R^2 to be $-CH(CH_3)O(C_1-C_6)$ alkyl, R^8 to be H, and p to be 1 with a reasonable expectation of obtaining a polymer suitable for use in bilayer resist that have controlled and/or lower dissolution rates with little or no loss of photospeed. Thus, present invention of claim 2 is anticipated by or, in the alternative, obvious over Gronbeck.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sin J. Lee/

Primary Examiner, Art Unit 1795

September 1, 2008